

WHAT IS CLAIMED IS:

1. A sheet treating apparatus mountable in a space portion of an image forming apparatus, said image forming apparatus including an image-forming portion for forming an image on a sheet, an image-reading portion for reading an image of an original, said image-reading portion being disposed above said image-forming portion, and said space portion into which the sheet is delivered, said space portion being formed between said image-forming portion and said image-reading portion, said sheet treating apparatus comprising:

a connection path unit to be connected with a sheet delivery path for delivering the sheet from said image-forming portion, said connection path unit being to be mounted in said space portion from an outside of a side surface of a main body of said image forming apparatus; and

a sheet-treating unit for performing a treatment of the sheet transported from said connection path unit, said sheet-treating unit being to be mounted in said space portion from a front side of the main body of said image forming apparatus.

2. A sheet treating apparatus according to Claim 1, wherein said connection path unit comprises a sheet path including:

a rotation guide rotatable to the outside of the

main body of said image forming apparatus; and
a fixed guide to be fixed to the main body of said
image forming apparatus.

- 5 3. A method of mounting a sheet treating apparatus in a space portion of an image forming apparatus, said image forming apparatus including an image-forming portion for forming an image on a sheet, an image-reading portion for reading an image of an original, said image-reading portion being disposed above said image-forming portion, and said space portion into which the sheet is delivered, said space portion being formed between said image-forming portion and said image-reading portion, said sheet treating apparatus comprising a connection path unit to be connected with a sheet delivery path for delivering the sheet from said image-forming portion, and a sheet-treating unit for performing a treatment of the sheet transported from said connection path unit, said method comprising the steps of:
 - 20 mounting said connection path unit in said space portion from an outside of a side surface of a main body of said image forming apparatus; and
 mounting said sheet-treating unit in said space portion from a front side of the main body of said image forming apparatus.
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4. A method according to Claim 3, wherein said

sheet-treating unit is mounted after said connection path unit has been mounted.

5. An image forming apparatus including an image-forming portion for forming an image on a sheet, an image-reading portion for reading an image of an original, said image-reading portion being disposed above said image-forming portion, and a space portion into which the sheet is delivered, said space portion being formed between said image-forming portion and said image-reading portion, wherein a sheet treating apparatus is mountable in said space portion of said image forming apparatus, said sheet treating apparatus including a connection path unit to be connected with a sheet delivery path for delivering the sheet from said image-forming portion, and a sheet-treating unit for performing a treatment of the sheet transported from said connection path unit, wherein said connection path unit is mounted in said space portion from an outside of a side surface of a main body of said image forming apparatus and said sheet-treating unit is mounted in said space portion from a front side of the main body of said image forming apparatus.

6. An image forming apparatus according to Claim 5, wherein said connection path unit comprises a sheet path including:

a rotation guide rotatable to the outside of the

main body of said image forming apparatus; and
a fixed guide to be fixed to the main body of said
image forming apparatus.

5 7. An image forming apparatus including an image-
reading portion for reading an image of an original, said
image-reading portion being disposed an upper part of
said apparatus, and an image-forming portion for forming
an image on a sheet, said image-forming portion being
10 disposed below said image-reading portion with a space
portion, and a sheet delivery portion in the space
portion formed between said image-reading portion and
said image-forming portion, said image forming apparatus
comprising:

15 a taper formed on an edge portion of a bottom of
said image-reading portion defining the space portion.

8. An image forming apparatus according to Claim 7,
wherein said taper is formed in a position of the edge
20 portion of the bottom of said image-reading portion, the
position being opposed to a sheet stacking surface of
said sheet delivery portion.

9. An image forming apparatus according to Claim 7,
25 wherein said taper formed at the edge portion of the
bottom of said image-reading portion forms an inclined
surface at an angle within a range of about 20 degrees to

30 degrees with respect to a plane on which said apparatus is installed.

10. An image forming apparatus according to Claim
5 7, wherein a sheet treating apparatus for performing a treatment such as sorting, alignment, stapling of sheets on which images are formed, is mounted in the space portion in which said sheet delivery portion is provided.

10 11. An image forming apparatus according to Claim
10, wherein said sheet treating apparatus includes at least one stack tray, and said taper formed at the edge portion of the bottom of said image-reading portion is situated above said stack tray of said sheet treating
15 apparatus.

12. An image forming apparatus including a space portion, in which a sheet is delivered, between an image-reading portion and an image-forming portion, said image forming apparatus comprising:

a treating apparatus for performing a predetermined treatment of the sheet, said treating apparatus being disposed in said space portion; and
25 a surface reverse path for reversing surfaces of the sheet, said surface reverse path being disposed above said treating apparatus.

13. An image forming apparatus according to Claim 12, wherein said surface reverse path includes a guide portion provided on a sheet-transporting guide of said treating apparatus.

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14. An image forming apparatus according to Claim 13, wherein said guide portion is movable to release the sheet-transporting guide.

10 15. An image forming apparatus according to Claim 13, wherein said guide portion serves as a grip for moving the sheet-transporting guide.

15 16. An image forming apparatus including a space portion, in which a sheet is delivered, between an image-reading portion and an image-forming portion, said image forming apparatus comprising:

20 a sheet guide member including an upper guide portion for forming a delivery path for delivering the sheet in said space portion, and a lower guide portion for forming a surface reverse path for reversing surfaces of the sheet.

25 17. An image forming apparatus according to Claim 16, wherein said sheet guide member is a flapper for switching sheet transportation.

18. An image forming apparatus according to Claim 12 or 16, wherein said surface reverse path can reverse the surfaces of the sheet without exposing the sheet to an outside of said apparatus.

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19. An image forming apparatus including a space portion, in which a sheet is delivered, above an image-forming portion, said image forming apparatus comprising:

10 treatment of a sheet, said treating apparatus being disposed in said space portion; and

a surface reverse path for reversing surfaces of the sheet, said surface reverse path being disposed above said treating apparatus.

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20. An image forming apparatus according to Claim 19, further comprising:

20 treatment of a sheet, said treating apparatus being disposed in said space portion; and

21. An image forming apparatus comprising:

image reading means for reading an image of an original;

25 image forming means for forming the image on a sheet on a basis of image reading information of said image reading means;

delivery sheet stacking means for stacking the sheet on which the image has been formed by said image forming means, said delivery sheet stacking means being disposed below said image reading means;

5 operation means for inputting information necessary for forming the image, said operation means being disposed in a part around said image reading means; and an exposed part through which said delivery sheet stacking means is exposed to be seen from said image
10 reading means and said operation means when said image reading means and said operation means are viewed in plan.

22. An image forming apparatus according to Claim 21, wherein the part around said image reading means is a
15 part on a front side of said image reading means.

23. An image forming apparatus according to Claim 21, wherein said exposed part is situated on a front side of said delivery sheet stacking means.

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24. An image forming apparatus according to any one of Claims 21 to 23, further comprising:

treatment sheet stacking means for stacking the sheet delivered from said image forming means; and
25 sheet delivery means for delivering the sheet stacked on said treatment sheet stacking means, wherein said sheet delivery means can deliver the sheet to said

exposed part.

25. An image forming apparatus according to any one of Claims 21 to 23, further comprising:

5 treatment sheet stacking means for stacking the sheet delivered from said image forming means;
sheet treating means for treating the sheet stacked on said treatment sheet stacking means; and
sheet delivery means for delivering the sheet
10 treated by said sheet treating means to said delivery sheet stacking means, wherein said sheet delivery means can deliver the sheet to said exposed part.

26. An image forming apparatus according to Claim
15 24, further comprising sheet aligning means for aligning at least one of an end portion of the sheet stacked on said treatment sheet stacking means, said end portion being parallel to a delivery direction of said sheet, and an end portion of the sheet in the delivery direction.

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27. An image forming apparatus according to any one of Claims 21 to 23, further comprising:

lift/lower means for lifting and lowering said delivery sheet stacking means; and
25 a vibration-preventing member being elastic, said vibration-preventing member being disposed between a fixed member opposed to said delivery sheet stacking

means and said delivery sheet stacking means.

28. An image forming apparatus according to any one of Claims 21 to 23, further comprising:

- 5 lift/lower means for lifting and lowering said delivery sheet stacking means;
- lift/lower guide means for guiding a lifting and lowering of said delivery sheet stacking means;
- supporting means for supporting said delivery sheet
- 10 stacking means to lift and lower said delivery sheet stacking means; and
- a vibration-preventing member being elastic, said vibration-preventing member being disposed between a fixed member opposed to said delivery sheet stacking
- 15 means and said delivery sheet stacking means,
- wherein said supporting means and said lift/lower guide means are disposed in an inner and rear side of a main body of said image forming apparatus.
- 20 29. An image forming apparatus according to Claim 27, wherein said vibration-preventing member is provided on one of said fixed member and said delivery sheet stacking means, and said image forming apparatus further comprises a sliding auxiliary member having a coefficient
- 25 of friction smaller than that of said vibration-preventing member, said sliding auxiliary member being provided on a surface opposed to the other of said fixed

member and said delivery sheet stacking means.

30. An image forming apparatus according to Claim 27, wherein said vibration-preventing member is a sponge.

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31. An image forming apparatus according to Claim 27, further comprising lift/lower position detecting means for detecting a position of the sheet stacked on said delivery sheet stacking means.

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32. A sheet stacking apparatus comprising:
delivery sheet stacking means for stacking a sheet on which an image has been formed by image forming means of an image forming apparatus, said image forming means being for forming the image on the sheet;
lift/lower means for lifting and lowering said delivery sheet stacking means; and
a vibration-preventing member provided between a fixed member opposed to said delivery sheet stacking means and said delivery sheet stacking means.

33. A sheet stacking apparatus according to Claim 32, said sheet stacking apparatus further comprising:
lift/lower guide means for guiding a lifting and lowering of said delivery sheet stacking means; and
supporting means for supporting said delivery sheet stacking means to lift and lower said delivery sheet

stacking means, wherein said lift/lower guide means and said supporting means are disposed on an inner and rear side of a main body of said sheet stacking apparatus.

5 34. A sheet stacking apparatus according to Claim 33, wherein said vibration-preventing member is provided on one of said fixed member and said delivery sheet stacking means, and said sheet stacking apparatus further comprises a sliding auxiliary member having a coefficient 10 of friction smaller than that of said vibration-preventing member, said sliding auxiliary member being provided on a surface opposed to the other of said fixed member and said delivery sheet stacking means.

15 35. A sheet stacking apparatus according to any one of Claims 32 to 34, wherein said vibration-preventing member is a sponge.

20 36. A sheet stacking apparatus according to any one of Claims 32 to 34, further comprising lift/lower position detecting means for detecting a position of the sheet stacked on said delivery sheet stacking means.

25 37. A sheet aftertreatment apparatus comprising: treatment sheet stacking means for stacking a sheet on which an image has been formed by image forming means of an image forming apparatus according to any one of

Claims 21 to 23;

sheet treating means for treating the sheet stacked on said treatment sheet stacking means; and

sheet delivery means for delivering the sheet
5 stacked on said treatment sheet stacking means.

38. A sheet aftertreatment apparatus for performing a treatment of a sheet delivered from image forming means of an image forming apparatus, said image 10 forming means forming an image on the sheet, said sheet aftertreatment apparatus delivering the sheet after the treatment to delivery sheet stacking means of a sheet stacking apparatus according to any one of Claims 32 to 34, said sheet aftertreatment apparatus comprising:

15 treatment sheet stacking means for stacking the sheet delivered from said image forming means of said image forming apparatus;

sheet treating means for treating the sheet stacked on said treatment sheet stacking means; and

20 sheet delivery means for delivering the sheet treated by said sheet treating means.

39. A sheet aftertreatment apparatus according to Claim 37, further comprising sheet aligning means for 25 aligning at least one of an end portion of a stack of sheets stacked on said treatment sheet stacking means, said end portion being parallel to a delivery direction

of the sheets, and an end portion of the stack of sheets in the delivery direction.